

SY14312A 技术参考资料

产品简介

SY14312A 是一款专为新能源汽车动力电池线束 FUSE（保险丝）保护设计的单组分 UV 固化阻燃胶粘剂，产品采用点胶工艺施胶，经紫外光照射后快速固化，在 FUSE 熔断时形成有效阻隔，实现熔断不起火且不影响熔断时间的核心功能。产品固化后具有优异的阻燃性能、良好的电气绝缘性能和耐环境老化性能，适用于动力电池包内线束 FUSE 节点的涂覆保护。。

固化前材料性能

	典型值
状态	半透明液体
化学类型	改性丙烯酸
比重@ 25℃,g/ml	1.1 ± 0.05
粘度@ 25℃, Brookfield DV-II, 6#转子 20rpm, Pa · s	12-16
触变指数, Ti	> 2.5

固化后材料物理性能

硬度, 邵氏A	40-50
断裂伸长率, %	> 200
拉伸强度, Mpa	> 2
剪切强度 (铝+pc) , Mpa	> 16
TGA5%热失重, °C	≥260
体积电阻率, Ω.cm	1.2 x 10 ¹⁴
表面电阻率, Ω	8.5 x 10 ¹³
介电强度, 1MHz kV/mm	≥23
介电常数, 1MHz	3.2
漏电起痕指数CTI,V	≥550
固化收缩率, %	< 1
适用温度, °C	-40~+200°C
沸水吸水率 2h, %	< 0.25
阻燃等级, UL94	V1

*固化条件：汞灯光源：500mW/cm²@365nm 60 秒

固化条件

SY-14312A 在波长为 365nm~405 的汞灯紫外光照射下固化。要想使暴露于空气中的表面完全固化，也需 250nm 波长的紫外光照射。固化速度取决于照射到产品表面的紫外线光强。

表面脱粘时间

500mW/cm²@365nm < 10s

全固化时间（365nm LED 光源）

500 mW/cm²@365nm 12s~60s

全固化能量（（365nm LED 光源）

50~70mj/cm²@365nm

*说明：能量=功率*时间；建议 2mm 以下点胶厚度条件下，固化能量 800mJ~1500mJ 范围；具体可以根据设备参数及产品结构获得最优的固化

参数，后固化加热可以有效提高附着力，耐温性，耐水性等

应用性能 — FUSE 熔断保护

测试项目	测试条件	实测结果	单位
熔断时间	30V DC 5A	0.061 ± 0.010	s
熔断时是否起火	30V DC, 目视/录像观察	不起火	—
熔断后胶层状态	30V DC, 熔断后观察	熔断完全，胶体为变化	—

设备：Mango15 保险丝熔断实验系统 PAC BW V1.0.3。客供 FUSE

储存条件/期限

产品储存于未开封的原包装内，存放在阴暗干燥处。储存方法在产品外包装上有所标注。被开封使用的产品有可能在使用中受到环境污染。为避免污染未用胶液，开封后产品建议在 72 小时内用完，禁止将任何开放过胶液倒回原包装内；使用前建议进行离心脱泡（2000 转<1000g 离心力>; 2 分钟）

存储条件：10℃ ± 3℃ 避光冷藏储存。

储存期限：6 个月@5~15℃避光冷藏；

包装规格

55ml/支

注意事项

本品不宜在纯氧和/或富氧中使用，不能用做氯气或其它强氧化性物质的密封材料。

粘接基材使用前需保证清洁，无异物；PCBA/FPCBA 等建议表面能达因值测试 >32 dyn/cm；

有关本产品的安全注意事项，请查阅材料的安全数据资料（MSDS）。在储存时应远离日光、紫外光和人造光源。施胶时请使用黑色胶管进行施胶。推荐粘接部位的光强最小为 40mW/cm²，所需要的时间为相同光强下初固时间的 4-5 倍。

说明

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